



Application of a HACCP-QMRA approach for managing the impact of climate change on food quality and safety

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Abstract:

The work presented focuses on predictive modelling for estimating the risk to consumers due to consumption of food contaminated with Specific Foodborne Pathogens (SFP) or estimating the remaining shelf life of the product. An approach based on integration of the existing Hazard Analysis and Critical Control Point (HACCP) approach with the Quantitative Microbial Risk Assessment (QMRA) is presented which is developed as part of the Chill-On EC FP6 research project. The paper describes the main principles of operation of the system and introduces elements of practical implementation and operation of the HACCP system combined with QMRA as well as a Shelf Life Predictor (SLP). The possibility for managing the impact of climate change by using HACCP-QMRA-SLP in supply chains is discussed. (c) 2010 Published by Elsevier Ltd.

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Resource Description

Early Warning System:

resource focus on systems used to warn populations of high temperatures, extreme weather, or other elements of climate change to prevent harm to health

A focus of content

Exposure :

weather or climate related pathway by which climate change affects health

Food/Water Quality, Food/Water Security

Food/Water Quality: Pathogen

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Climate Change and Human Health Literature Portal

Global or Unspecified

Health Impact:

specification of health effect or disease related to climate change exposure

Infectious Disease

Infectious Disease: Foodborne/Waterborne Disease

Foodborne/Waterborne Disease: General Foodborne/Waterborne Disease

Intervention:

strategy to prepare for or reduce the impact of climate change on health

A focus of content

Mitigation/Adaptation:

mitigation or adaptation strategy is a focus of resource

Adaptation

Resource Type:

format or standard characteristic of resource

Research Article, Research Article

Timescale:

time period studied

Time Scale Unspecified